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claims 1, 2 and 4 - 10

Claims

1.(twice amended) A method for the stimulation and production of a hydrocarbon containing substance from a location below the surface of the earth, where said location is in fluid communication, via a well casing, with said surface, said method comprising the steps of

- 5 a.) positioning a transducer mechanism within said well casing at said location, said mechanism comprising a plurality of axially, spaced apart, circular transducer elements, where said transducer elements are electrically arranged in parallel and electrically excitable to produce a high energy, narrow, radiation pattern of high energy impulses extending
- 10 laterally from said well casing into said location;

b.) maintaining said transducer mechanism within an oil filled medium at a pressure essentially equal to the area in horizontal proximity to said mechanism; and,

- c.) energizing said transducer mechanism.

2.(twice amended) The method according to claim 1, wherein said high energy, radiation pattern is horizontally focused within a circular band of between 2 and 3 degrees.

C ~~3~~ ~~4~~ (amended) The method according to claim ~~2~~<sup>1</sup>, wherein said transducer elements are sealed within a pressure controlled housing.

B3 ~~4~~ ~~5~~ (amended) The method according to claim 1, wherein said transducer mechanism is energized at a frequency of at least 20 kHz.

<sup>5</sup>~~6~~.(amedned) The method according to claim 1, wherein said well casing includes a series of through holes at said location to facilitate movement of said hydrocarbon containing substance into said well casing.

<sup>6</sup>~~7~~.(amended) The method according to claim <sup>1</sup>~~3~~, wherein each said transducer element is a piezoelectric substance.

<sup>7</sup>~~8~~.(amedned) The method according to claim <sup>6</sup>~~7~~, wherein said piezoelectric substance is a ceramic.

<sup>8</sup>~~9~~.(amended) The method according to claim <sup>8</sup><sup>7</sup>~~8~~, wherein said transducer mechanism is energized at a frequency of at least 20kHz.

<sup>9</sup>~~10~~.(amended) The method according to claim 1, wherein adjacent said plural transducer elements are spaced apart by dielectric spacer members.

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